

Title (en)

Organosilanes and/or Organosiloxanes for filled polyamides

Title (de)

Organosilan- und/oder Organosiloxan-haltige Mittel für gefülltes Polyamid

Title (fr)

Organosilanes et/ou organosiloxanes pour des polyamides remplis

Publication

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Application

**EP 04101413 A 20001026**

Priority

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- EP 00123195 A 20001026

Abstract (en)

Organosilane- and/or organosiloxane-containing agents for the surface modification of fillers to be used in the production of filled polyamides have a range of compositions. Organosilane- and/or organosiloxane-containing agents for the surface modification of fillers to be used in the production of filled polyamides comprise: (a) an amino-functional silicon (Si) compound of formula (I) or a bis-aminosilane or a tert. aminosilane or a mixture of primary, secondary and/or tertiary aminosil(ox)anes obtained by hydrolysis, condensation or cocondensation of primary, secondary and/or tertiary aminosilanes, the average degree of oligomerization of the aminosiloxane being 2-20; (b) (i) an amino-functional Si compound of formula (II) and/or a secondary and/or tertiary aminosilane and (ii) an alkyl-functional Si compound of formula (III) or an alkenyl-functional Si compound of formula (IV) or a polyether-functional Si compound of formula (V) and/or (iii) optionally a content of siloxanes obtained by hydrolysis, condensation or cocondensation of compounds of formula (II), secondary or tertiary aminosilanes, bisaminosilanes or compounds of formula (III), (IV) or (V), the average degree of oligomerization of the siloxanes being 2-20; or (c) (i) an alkyl-functional Si compound of formula (III), (ii) an alkenyl-functional Si compound of formula (IV) and/or (iii) optionally a content of siloxanes obtained by hydrolysis, condensation or cocondensation of compounds of formula (III) and (IV), the average degree of oligomerization of the siloxanes being 2-20. R-NH-(CH<sub>2</sub>)<sub>3</sub>-Si(CH<sub>3</sub>)<sub>x</sub>(Z)<sub>3-x</sub> (I) R'-Si(CH<sub>3</sub>)<sub>x</sub>(Z)<sub>3-x</sub> (II) R<sub>1</sub>-Si(CH<sub>3</sub>)<sub>x</sub>(Z)<sub>3-x</sub> (III) CH<sub>2</sub>=CH-(CH<sub>2</sub>)<sub>n</sub>-Si(CH<sub>3</sub>)<sub>x</sub>(Z)<sub>3-x</sub> (IV) R''-(O-CH<sub>2</sub>-CHR''')<sub>n</sub>-O-(CH<sub>2</sub>)<sub>m</sub>-Si(CH<sub>3</sub>)<sub>x</sub>(Z)<sub>3-x</sub> (V) Z = 1-3C alkoxy, OH or Cl; x = 0 or 1; R = 1-20C alkyl, 5-12C cycloalkyl or 6-20C aryl; R' = an amino group of formula H<sub>2</sub>N-((CH<sub>2</sub>)<sub>2</sub>NH)<sub>y</sub>-(CH<sub>2</sub>)<sub>3</sub>- with y = 0, 1 or 2; R<sub>1</sub> = optionally cyclic, optionally fluorinated 1-16C alkyl; n = 1-20; R'' = 1-4C alkyl; R''' = H or methyl; m = 2 or 3; and n = 5- 20.

Abstract (de)

Die vorliegende Erfindung betrifft spezielle Organosilan- und/oder Organosiloxanhaltige Mittel für die Modifizierung der Oberfläche von Füllstoffen einschließlich deren Verwendung zur Herstellung gefüllter Polyamid-Compounds. Ferner betrifft die vorliegende Erfindung spezielle oberflächenmodifizierte Füllstoffe, hiermit gefüllte Polyamide und Artikel, die hierauf basieren.

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IPC 8 full level

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**C08K 9/06** + **C08L 77/00**

Citation (search report)

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**EP 1111002 A2 20010627**; **EP 1111002 A3 20020821**; **EP 1111002 B1 20071010**; AT E375379 T1 20071015; AT E408644 T1 20081015; DE 19961972 A1 20010628; DE 50014705 D1 20071122; DE 50015367 D1 20081030; EP 1435373 A1 20040707; EP 1435373 B1 20080917; ES 2292397 T3 20080316; ES 2314340 T3 20090316; JP 2001226583 A 20010821; JP 4588871 B2 20101201; NO 20006648 D0 20001222; NO 20006648 L 20010625; US 6500883 B1 20021231

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